DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: PICKEREL POND		Lake Area (ha):	30.27
Town: LACONIA		Maximum depth (m):	7.6
County: Belknap		Mean depth (m):	3.8
River Basin: Merrimack		Volume (m³):	1152500
Latitude: 43°36'01"		Relative depth:	1.2
Longitude: 71°30'42"	W	Shore configuration:	1.38
Elevation (ft):	615	Areal water load (m/yr)	: 4.99
Shore length (m):	2700	Flushing rate (yr^{-1}) :	1.30
Watershed area (ha):	310.8	P retention coeff.:	0.66
<pre>% watershed ponded:</pre>	0.0	Lake type:	natural

BIOLOGICAL:	19 February 1998	9 July 1997
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 65%	DINOBRYON 60%
#2	UROGLENOPSIS 20%	CERATIUM 10%
#3	SYNURA 8%	ASTERIONELLA 10%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		4.76
DOM. ZOOPLANKTON (% TOTAL) #1	ASPLANCHNA 25%	CYCLOPOID COPEPOD 25%
#2	CONOCHILUS 25%	DAPHNIA 18%
#3		CALANOID COPEPOD 14%
ROTIFERS/LITER	44	29
MICROCRUSTACEA/LITER	4	79
ZOOPLANKTON ABUNDANCE (#/L)	52	122
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		2.6
BOTTOM DISSOLVED OXYGEN (mg/L)	8.7	1.2
BACTERIA (E. coli, #/100 ml) #1		
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.5 Hypolimnion volume (m^3) : 51500 Anoxic volume (m^3) : None

CHEMICAL:			PICKEREL LACONIA	POND	
	19 Febru	uary 1998	9 3	July 1997	
DEPTH (m)	1.0	3.0	1.5		4.5
pH (units)	6.0	6.2	6.9		6.1
A.N.C. (Alkalinity)	4.9	7.6	5.7		5.9
NITRATE NITROGEN	< 0.05	0.06	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.40	0.50	0.40		0.30
TOTAL PHOSPHORUS	0.014	0.010	0.015		0.019
CONDUCTIVITY (µmhos/cm)	102.0	96.7	78.9		79.6
APPARENT COLOR (cpu)	50	40	28		36
MAGNESIUM			0.73		
CALCIUM			3.6		
SODIUM			10.3		
POTASSIUM			0.59	:	
CHLORIDE	23	21	17		17
SULFATE	4	3	3		3
TN : TP	29	56	27		16
CALCITE SATURATION INDEX			3.1		

All results in mg/L unless indicated otherwise

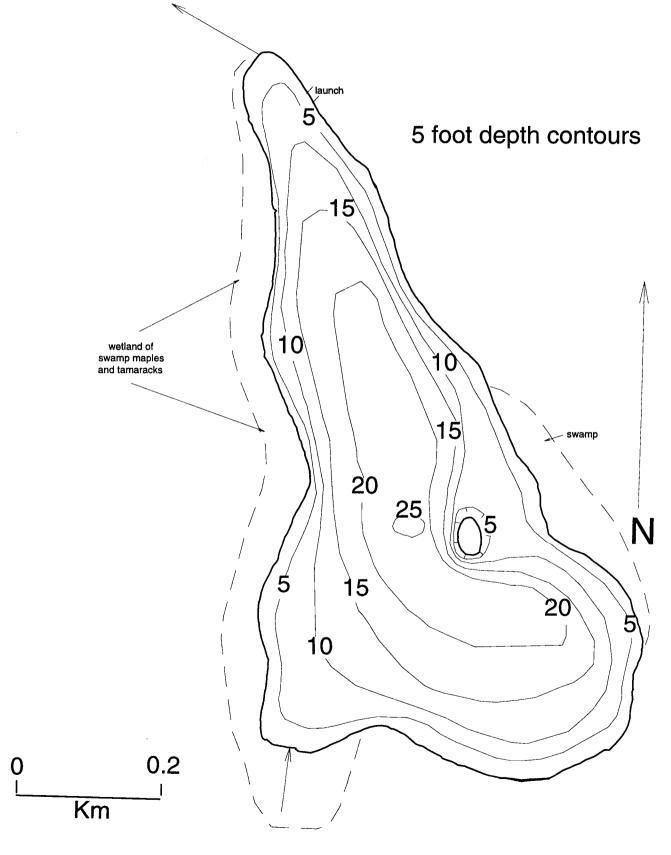
TROPHIC CLASSIFICATION: 1997

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
1	3	3	1	8	Meso.

COMMENTS:

- 1. This pond was previously surveyed in 1984 and was classified eutrophic at that time. The major changes in trophic parameters were in chlorophyll (decrease from 22 to less than 5 mg/m³) and in bottom dissolved oxygen (no oxygen below 3 meters in 1984). Note, the 1984 sample date was in late August and may be the reason for the greater oxygen depletion at that time.
- 2. The pond was placed on the 303(d) list of impaired waters due to high chlorophyll in 1984, but was removed after the 1997 sampling.
- 3. Moderate chloride and sodium values suggest some salt runoff into the pond.
- 4. Narrow gravel lane to launch boat at northern end of the pond near the outlet; no parking except along road.
- 5. Mostly undeveloped shoreline.

Pickerel Pond Laconia



FIELD DATA SHEET

LAKE: PICKEREL POND

DATE: 07/09/97

TOWN: LACONIA

WEATHER: OVERCAST & WARM; LT. BREEZE

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	25.0	8.3	100 %
1.0	25.0	8.2	99 %
2.0	24.5	8.4	99 %
3.0	22.0	5.8	65 %
4.0	19.2	4.6	49 %
5.0	15.0	1.2	12 %
6.0	13.2	1.2	11 %

SECCHI DISK (m): 2.6

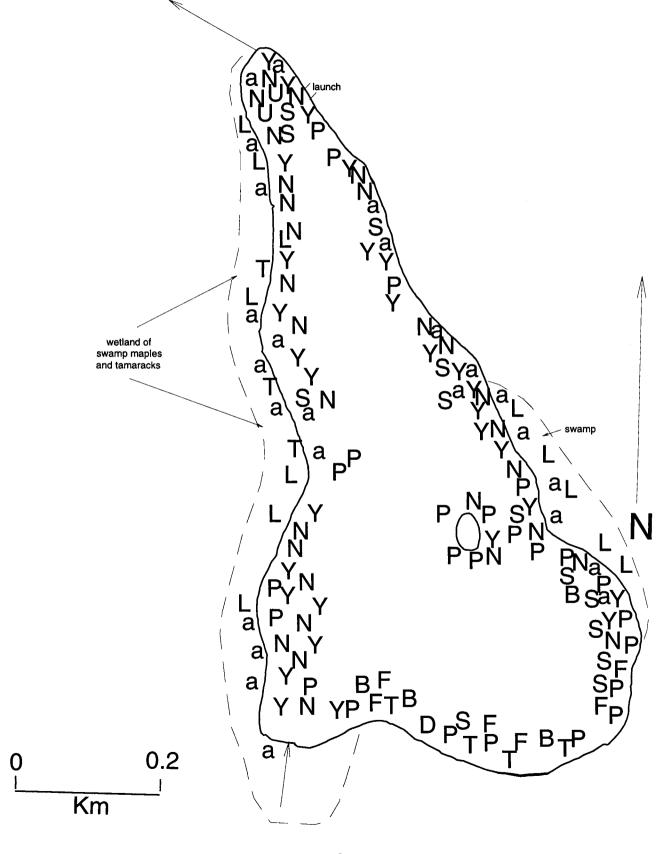
COMMENTS:

BOTTOM DEPTH (m): 6.5

TIME: 1050

*Dissolved oxygen values are in mg/L

Pickerel Pond Laconia



AQUATIC PLANT SURVEY

LAKE:	PICKEREL	POND	TOWN:	LACONIA	DATE:	07/09/97
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Key	PLANT	NAME	300003005
ией	GENERIC	COMMON	ABUNDANCE
P	Pontederia cordata	Pickerelweed	Common
Y	Nuphar	Yellow water lily	Common
N	Nymphaea	White water lily	Common
а	Peltandra virginica	Arrow arum	Scattered
L	Chamaedaphne calyculata	Leatherleaf	Common
W	Potamogeton	Pondweed	Scattered
U	Utricularia	Bladderwort	Sparse
S	Sparganium	Bur reed	Scattered
T	Typha	Cattail	Sparse
F	Nymphoides cordatum	Floating heart	Sparse
В	Brasenia schreberi	Water shield	Sparse
D	Decodon verticillatus	Swamp loosestrife	Sparse

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

- Plants were common along most of the shoreline. Wooded wetlands were along much of the shore. 1.
- 2.
- 3. Beaver lodge was present.